

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

In the present Official Action, Claims 1-9 are pending and Claims 10-29 have been withdrawn. Claims 1-9 are rejected under 35 U.S.C. § 102 (b) as allegedly anticipated by U.S. Patent No. 6,713,390 to M'Saad, et al. ("M'Sadd, et al.").

Concerning the § 102 rejection, it is axiomatic that anticipation under § 102 requires that the prior art reference disclose each and every element of the claim to which it is applied. In re King, 801 F.2d, 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1996). Thus, there must be no differences between the subject matter of the claim and the disclosure of the prior art reference. Stated another way, the reference must contain within its four corners adequate direction to practice the invention as claimed. The corollary of the rule is equally applicable: Absence from the applied reference of any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

Applicants submit that the claimed method, as recited in Claims 1-9, is not anticipated by the disclosure of M'Saad, et al. Specifically, M'Saad, et al. do not disclose a method for improving the interfacial strength including adhesion and cohesion between two different layers, which includes: positioning a substrate having an upper first layer of dielectric or conductive material in a reactor chamber that is capable of generating a plasma; *exposing said upper first layer to a surface preparation plasma for a first period of time; introducing precursors of a second layer to be deposited on the upper first layer for a second period of time, while the surface preparation plasma is active in the reactor; and stopping the surface pretreatment*

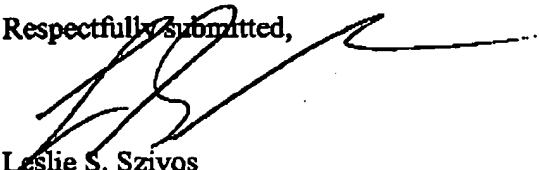
plasma at the end of the second period of time and adjusting plasma parameters for deposition of said second layer.

M'Saad, et al. provide a method for fabricating a barrier layer on a substrate that may include a conductive feature using a gaseous mixture that includes a hydrocarbon-containing gas and a silicon-containing gas. The gas mixture is provided to a process chamber and is used to form a plasma for depositing the barrier layer. Argon, Ar, may be included with the gas mixture to help in gas dissociation. See Col 3, lines 35-39. Applicants observe that M'Saad, et al. do not disclose *exposing an upper first layer comprising a dielectric or a conductor to a surface preparation plasma for a first period of time; introducing precursors of a second layer to be deposited on the upper first layer for a second period of time, while the surface preparation plasma is active in the reactor; and stopping the surface pretreatment plasma at the end of the second period of time and adjusting plasma parameters for deposition of said second layer.* These steps, which are preformed in the claimed invention, but not in M'Saad, et al., provide improved interfacial strength including adhesion and cohesion between two different layers.

The foregoing remarks clearly demonstrate that the applied reference does not teach each and every aspect of the claimed invention, as required by King and Kloster Speedsteel; therefore the claims of the present application are not anticipated by M'Saad, et al. Applicants respectfully submit that the instant § 102 rejection has been obviated and withdrawal thereof is respectfully requested.

Thus, in view of the foregoing remarks, it is firmly believed that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,


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